CLAIMS

1. A bar connector assembly comprising a body having a bar seat section and a bar retainer moveable relative to the seat section to enable entry of a bar into the assembly, the seat section being adapted to receive and position a second bar relative to an adjacent bar already connected to the assembly, the retainer being moveable between a first position allowing the second bar to be placed on the seat section and a second position to block removal of the second bar from the assembly.

2. A connector assembly according to claim 1 for connecting together opposed reinforcement bars wherein at least one of the bars comprises a loop section, the body of the connector assembly comprising a main body and the retainer comprising a separate bridging member, the main body having an opening, the seat section comprising a loop section seat accessible through the opening so that the loop section may be secured to the main body when positioned on the seat, the bridging member being adapted to bridge across the opening when it is coupled to the main body, the other bar being otherwise connected to the main body opposite the loop section seat, the relative dimensions of the bars, the main body and the bridging member being so chosen and arranged that a rigid portion of the assembly is located between the bars to resist compressive forces which may tend to force the bars toward each other and a further rigid section of the assembly is located in the loop section to resist deformation of the loop section when under tension.

3. A connector assembly according to claim 1 wherein the bar connector assembly enables connection of bars to the assembly so that bars extend from the connector in opposite directions.

4. A connector assembly according to claim 1 wherein the connector assembly is configured and the bars have ends configured so that the ends may be held captive in the assembly.

5. A connector assembly according to claim 1 wherein one of the said bars is a single non-loop bar having an end projection that fits into the main body and is held captive.

6. A connector assembly according to claim 1 wherein the seat section comprises a curved channel into which a curved section of bar is positioned, the channel being a the boundary of an upstanding land filling the inside of the curved section so that upon a load being applied to the bar in tension, the land section aids in retaining the bar in position and inhibits its deformation.

7. A connector assembly according to claim 1 wherein the retainer comprises an edgeways slidable member able to slide into the body after the bar has been inserted, the bar in combination with the seat section and the retainer serving to secure the retainer and thereby the bar in position in the seat section.

8. A connector assembly according to claim 1 wherein the retainer bridges across opposite sides of the body such that the body and retainer have at least one of the bars located between them.

9. A connector assembly according to claim 1 wherein the assembly is symmetrical so that two identically shaped curved bars are connected together by the assembly with the bars so connected together occupying a common plane.

10. A connector assembly according to claim 1 wherein the assembly is symmetrical so that two identically shaped curved bars are connected together by the assembly with the bars so connected together occupying a common plane, the bars being U-shaped ends of projecting rebars.

11. A connector assembly according to claim 1 wherein the main body includes a retainer guideway and the retainer has a guide that travels on the guideway, the guide and guideway being tapered so that the retainer is wedged in position.

12. A connector assembly according to claim 1 wherein the main body includes a retainer guideway and the retainer has a guide that travels on the guideway, the guide being tapered so that the retainer is wedged in position.

13. A connector assembly according to claim 1 wherein the main body includes a retainer guideway and the retainer has a guide that travels on the guideway, the guideway being tapered so that the retainer is wedged in position

14 A connector assembly according to claim 1 wherein any gaps between the bars are filled by the assembly so that compressive movement is blocked and the assembly is symmetrical in side view with the body resisting tension on one side and the retainer bridging the opposite side to resist tension so that force applied to the bars is distributed evenly through the assembly.

15. A connector assembly according to claim 1 wherein the second bar is curved and the retainer generates a clamping force on the curved section of the bar with an outward force applied in the direction of tension and an inward force opposite the outward force.

16. A connector assembly according to claim 1 wherein the second bar is curved and the retainer is wedged against the second bar.

17. A connector assembly according to claim 1 wherein the assembly has two opposed seats and both bars are curved having curved sections in confronting relation when located in operative position and the retainer is wedged between the bars.

18. A connector assembly according to claim 1 wherein the assembly has two opposed seats defined as the inner peripheral portion of opposed lands and both bars are curved having curved sections in confronting relation and wrapped around the respective lands when located in operative position and the retainer is wedged between the bars applying an outward force to the bars and bridges across the lands applying an inward force to each of the lands tending to prevent separation of the lands when tensioned.

19. A connector assembly according to claim 2 wherein the bar connector assembly enables connection of bars to the assembly so that bars extend from the connector in opposite directions.

20. A connector assembly according to claim 2 wherein the connector assembly is configured and the bars have ends configured so that the ends may be held captive in the assembly.

21. A connector assembly according to claim 2 wherein one of the said bars is a single non-loop bar having an end projection that fits into the main body and is held captive.

22. A connector assembly according to claim 2 wherein the seat section comprises a curved channel into which a curved section of bar is positioned, the channel being a the boundary of an upstanding land filling the inside of the curved section so that upon a load being applied to the bar in tension, the land section aids in retaining the bar in position and inhibits its deformation.

23. A connector assembly according to claim 2 wherein the retainer comprises an edgeways slidable member able to slide into the body after the bar has been inserted, the bar in combination with the seat section and the retainer serving to secure the retainer and thereby the bar in position in the seat section.

24. A connector assembly according to claim 2 wherein the retainer bridges across opposite sides of the body such that the body and retainer have at least one of the bars located between them.

25. A connector assembly according to claim 2 wherein the assembly is symmetrical so that two identically shaped curved bars are connected together by the assembly with the bars so connected together occupying a common plane.

26. A connector assembly according to claim 2 wherein the assembly is symmetrical so that two identically shaped curved bars are connected together by the assembly with the bars so connected together occupying a common plane, the bars being U-shaped ends of projecting rebars.

27. A connector assembly according to claim 2 wherein the main body includes a retainer guideway and the retainer has a guide that travels on the guideway, the guide and guideway being tapered so that the retainer is wedged in position.

28. A connector assembly according to claim 2 wherein the main body includes a retainer guideway and the retainer has a guide that travels on the guideway, the guide being tapered so that the retainer is wedged in position.

29. A connector assembly according to claim 2 wherein the main body includes a retainer guideway and the retainer has a guide that travels on the guideway, the guideway being tapered so that the retainer is wedged in position

30. A connector assembly according to claim 2 wherein any gaps between the bars are filled by the assembly so that compressive movement is blocked and the assembly is symmetrical in side view with the body resisting tension on one side and the retainer bridging the opposite side to resist tension so that force applied to the bars is distributed evenly through the assembly.

31. A connector assembly according to claim 2 wherein the second bar is curved and the retainer generates a clamping force on the curved section of the bar with an outward force applied in the direction of tension and an inward force opposite the outward force.

32. A connector assembly according to claim 2 wherein the second bar is curved and the retainer is wedged against the second bar.

33. A connector assembly according to claim 2 wherein the assembly has two opposed seats and both bars are curved having curved sections in confronting relation when located in operative position and the retainer is wedged between the bars.

34. A connector assembly according to claim 2 wherein the assembly has two opposed seats defined as the inner peripheral portion of opposed lands and both bars are curved having curved sections in confronting relation and wrapped around the respective lands when located in operative position and the retainer is wedged between the bars applying an outward force to the bars and bridges across the lands applying an inward force to each of the lands tending to prevent separation of the lands when tensioned.